 Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 16163-021002	Application No. 09/942,055
	Applicant Robert Powers et al.		
	Filing Date August 29, 2001	Group Art Unit 1631	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AB							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
<i>CSM</i>	AC	Arshavsky & Pugh, (1998) <i>Lifetime Regulation of G Protein-Effector Complex: Emerging Importance of RGS Proteins</i> , Neuron, 20:11-14
	AD	Clore, et al., (1989), <i>Determination of Three-Dimensional Structures of Proteins and Nucleic Acids in Solution by Nuclear Magnetic Resonance Spectroscopy</i> , Crit Rev Biochem Mol Biol, 24(5):479-564
	AE	Clore, et al., (1994) <i>Multidimensional Heteronuclear Magnetic Resonance of Proteins</i> , Methods Enzymol., 239:349-362
	AF	Hepler, et al., (1997) <i>RGS4 and GAIIP are GTPase-Activating Proteins for G_q and Block Activation of Phospholipase Cβ by γ-thio-GTP- G_q</i> , PNAS, 94:428-432
	AG	Hepler, et al., (1999) <i>Emerging Roles for RGS Proteins in Cell Signalling</i> , TIPS 20(9):376-382
	AH	Hunt, et al., (1996) <i>RGS10 is a Selective Activator of G_q, GTPase Activity</i> , Nature, 383:175-177
	AI	Koelle & Horvitz, (1996) <i>EGL-10 Regulates G Protein Signaling in the C. elegans Nervous System and Shares a Conserved Domain with Many Mammalian Proteins</i> , Cell, 84:115-125
	AJ	Laskowski, et al., (1993) <i>PROCHECK: A Program to Check the Stereochemical Quality Of Protein Structures</i> , J. Appl. Cryst., 26:283-291
	AK	Natochin, et al., (1998) <i>Mutational Analysis of the Asn Residue Essential for RGS Protein Binding to G-Proteins</i> , J. Biol. Chem., 273(12):6731-6735
	AL	Nilges, et al, (1988) <i>Determination of Three-Dimensional Structures of Proteins from Interproton Distance Data by Hybrid Distance Geometry-Dynamical Simulated Annealing Calculations</i> , FEBS Lett., 229(2):317-324
	AM	Posner et al., (1999) <i>Modulation of the Affinity and Selectivity of RGS Protein Interaction with G_q Subunits by a Conserved Asparagine / Serine Residue</i> , Biochemistry, 38:7773-7779
	AN	Sprang, S. R., (1997) <i>G Proteins, Effectors and GAPs: Structure and Mechanism</i> , Curr Opin St. Biol., 7:849-856
	AO	Tesmer & Sprang, (1998) <i>The Structure, Catalytic Mechanism and Regulation of Adenylyl Cyclase</i> , Curr. Opin. Structural Biol., 8:713-719
✓	AP	Wall, et al., (1998) <i>Structural Basis of Activity and Subunit Recognition in G Protein Heterotrimers</i> , Structure, 6:1169-1183

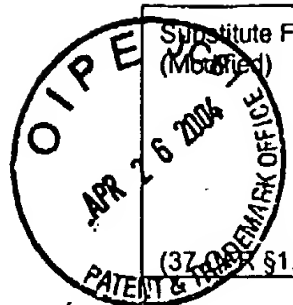
Examiner Signature <i>C. M. / H</i>	Date Considered <i>September 15, 2004</i>
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Other Documents (include Author, Title, Date, and Place of Publication)

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GSM	AQ	Wuthrich, et al., (1983) <i>Pseudo-structures for the 20 Common Amino Acids for Use in Studies of Protein Conformations by Measurements of Intramolecular Proton-Proton Distance Constraints with Nuclear Magnetic Resonance</i> , J. Mol. Biol., 169(4):949-961
↓	AR	Zuiderweg, et al., (1990) <i>Three-Dimensional ¹³C-Resolved Proton NOE Spectroscopy of Uniformly ¹³C-Labeled Proteins for the NMR Assignment and Structure Determination of Larger Molecules</i> , J. Mag. Reson., 86:210-216

Examiner Signature <i>C. M. 16</i>	Date Considered <i>September 15, 2004</i>
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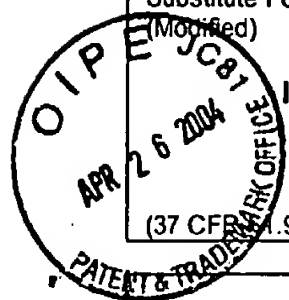
Foreign Patent Documents or Published Foreign Patent Applications

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Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
CSM	AC	Bax et al. "Measurement of Homo- and Heteronuclear J Couplings from Quantitative J Correlation." <u>Methods in Enzymol</u> 239:79-105, 1994.
	AD	Berghuis et al. "Structure of the GDP-Pi complex of Gly203-AlaG ₁₂ : a mimic of the ternary product complex of G α -catalyzed GTP hydrolysis." <u>Structure</u> 4:1277-1290, 1996.
	AE	Berman et al. "The GTPase-activating Protein RGS4 Stabilizes the Transition State for Nucleotide Hydrolysis." <u>J. Biol. Chem</u> 271:27209-27212, 1996.
	AF	Chen et al. "RGS-r, a retinal specific RGS protein, binds an intermediate conformation of transducin and enhances recycling." <u>Proc. Natl. Acad. Sci. USA</u> 93:12885-12889, 1996.
	AG	Clore et al. "Three-Dimensional Structure of Interleukin 8 in Solution." <u>Biochemistry</u> 29:1689-1696, 1990.
✓	AH	Coleman et al. "Structures of Active Conformations of G ₁₂ and the Mechanism of GTP Hydrolysis." <u>Science</u> 265:1405-1412, 1994.
	AI	de Alba et al. "Solution Structure of Human GAIP (Gα-Interacting Protein): A Regulator of G-Protein Signaling." <u>J. Mol. Bio.</u> 291:927-939, 1999.
CSM	AJ	DeVries et al. "RGS proteins: more than just GAPs for heterotrimeric G Proteins." <u>Trends Cell Biol.</u> 9:138-144, 1999.
	AK	DeVries et al. "GAIP, a protein that specifically interacts with the trimeric G protein G α_{13} , in a member of a protein family with highly conserved core domain." <u>Proc. Natl. Acad. Sci. USA</u> 92:11916-11920, 1995.
	AL	Dohlman et al. "RGS Proteins and Signaling by Heterotrimeric G Proteins." <u>J. Biol. Chem.</u> 272:3871-3874, 1997.
	AM	Druey et al. "Inhibition of regulator of G protein signaling function by two mutant RGS4 proteins." <u>Proc. Natl. Acad. Sci. USA</u> 94:24:12851-12856, 1997.
	AN	Druey et al. "Inhibition of G-protein-mediated MAP kinase activation by a new mammalian gene family." <u>Nature</u> 379:742-746, 1996.
	AO	Farfel et al. "The Expanding Spectrum of G Protein Diseases." <u>N. Eng. J. Med.</u> 340:1012-1020, 1996.
✓	AP	Garrett et al. "The Impact of Direct Refinement against Three-Bond HN-C α H coupling Constants on Protein Structure Determination by NMR." <u>J. Magn. Reson. Ser. B</u> 104:99-103, 1994.

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CSM	AQ	Garrett et al. "A Common Sense Approach to Peak Picking in Two-, Three-, and Four-Dimensional Spectra Using Automatic Computer Analysis of Contour Diagrams." <u>J. Magn Reso.</u> 95:214-220, 1991.
	AR	Gold et al. "Regulators of G-Protein Signaling (RGS) Proteins: Region-Specific Expression of Nine Subtypes in Rat Brain." <u>J. Neurosci.</u> 17:8024-8037, 1997.
	AS	Ikura et al. "Three-Dimensional NOESY-HMQC Spectroscopy of a ¹³ C-Labeled Protein." <u>J. Magn Reson.</u> 86:204-209, 1990.
	AT	Kozasa et al. "p115 RhoGEF, a GTPase, Activating Protein for Gα ₁₂ and G α ₁₃ ." <u>Science</u> 280:2109-2112, 1998.
	AU	Kraulis et al. "Determination of the Three-Dimensional Solution Structure of the C-Terminal Domain of Cellobiohydrolase I from <i>Trichoderma reesei</i> ." A Study Using Nuclear Magnetic Resonance and Hybrid Distance Geometry-Dynamical Simulated Annealing." <u>Biochemistry</u> 28:7241-7257, 1989.
	AV	Kuszewski et al. "The Impact of Direct Refinement against ¹³ C ^α and ¹³ C ^β Chemical Shifts on Protein Structure Determination by NMR." <u>J. Magn. Reson. Ser. B</u> 106:92-96, 1995.
	AW	Mixon et al. "Tertiary and Quaternary Structural Changes in G _{ial} Induced by GTP Hydrolysis." <u>Science</u> 270:954-960, 1995.
	AX	Moy et al. "NMR Solution Structure of the Catalytic Fragment of Human Fibroblast Collagenase Complexed with a Sulfonamide Derivative of a Thydroxamic Acid Compound." <u>Biochemistry</u> 38:22:7085-7096, 1996.
	AY	Moy et al. "Letter to the Editor: ¹ H, ¹⁵ N, ¹³ C, and ¹³ CO assignments and secondary structure determination of RGS4." <u>J. Biomol NMR</u> 15:339-340, 1999.
	AZ	Nilges et al. "Determination of three-dimensional structures of proteins by simulated annealing with interproton distance restraints. Application to crambin, potato carboxypeptidase inhibitor and barley serine proteinase inhibitor 2." <u>Protein Eng</u> 2:27-38, 1988.
	AAA	Sprang, S.R. "G Protein Mechanisms: Insights from Structural Analysis." <u>Annu. Rev. Biochem</u> 66:639-678, 1997.
	ABB	Srinivasa et al. "Mechanism of RGS4, a GTPase-activating Protein for G Protein α Subunits." <u>J. Biol. Chem.</u> 273:1529-1533, 1998.
	ACC	Tesmer et al. "Structure of RGS4 Bound to AIF ₄ -Activated G _{ial} : Stabilization of the Transition State for GTP Hyrolysis." <u>Cell</u> 89:251-261, 1997.
	ADD	Vuister et al. "An Empirical Correlation between ¹ J _{CoHα} and Protein Backbone Conformation." <u>J. Am. Chem. Soc.</u> 114:9674-9675, 1992.
	AEE	Wang et al. "RGSZ1, a G ₂ -selective RGS Protein in Brain." <u>J. Biol. Chem.</u> 273:26014-26025, 1998.
	AFF	Watson et al. "RGS family members: GTPase-activating proteins for heterotrimeric G-protein α-subunits." <u>Nature</u> 383:172-175, 1996.
✓	AGG	Zheng et al. "Divergence of RGS proteins: evidence for the existence of six mammalian RGS subfamilies." <u>TIBS</u> 24:411-414, 1999.

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